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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,816	11/27/2001	O-Ok Park	HYLEE59,001APC	9730

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EXAMINER

THOMPSON, CAMIE S

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/995,816

Applicant(s)

PARK ET AL.

Examiner

Camie S Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed February 2, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed February 2, 2004 have been acknowledged.
2. Examiner acknowledges amended claims 1-4 and 9-19.
3. Examiner acknowledges newly added claims 20-25.
4. Examiner acknowledges the submission of the foreign priority documents.
5. The objection to the specification is withdrawn due to applicant's amended specification.
6. The rejection of claims 1-5, 8-9, 12 and 18 under 35 U.S.C. 102(b) as being anticipated by Shi et al., U.S. Patent Number 5,817,431 is withdrawn due to applicant's argument and amended claims.
7. The rejection of claims 1-8 under 35 U.S.C. 103(a) as being unpatentable over Shi et al., U.S. Patent Number 5,817,431 in view of Pei et al., U.S. Patent Number 5,682,043 is withdrawn due to applicant's argument and amended claims.
8. The rejection of claims 1-6, 8-9 and 18 under 35 U.S.C. 102(b) as being anticipated by WO 97/40648 is withdrawn due to applicant's argument and amended claims.
9. The rejection of claims 10-11 and 13 under 35 U.S.C. 103(a) as being unpatentable over Schoo et al., U.S. Patent Number 6,326,091 in view of Pei et al., U.S. Patent Number 5,682,043 is withdrawn due to applicant's argument.
10. The rejection of claims 1-6, 8-9 and 14-19 under 35 U.S.C. 103(a) as being unpatentable over Schoo et al., U.S. Patent Number 6,326,091 is withdrawn due to applicant's argument.

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Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support for "movable" and "non-movable" in the specification. Applicant states that the support for the terms "movable" and "non-movable" are present in the PCT publication, which is incorporated in the present specification. Neither the terms nor their definition are in the PCT application. The terms and their definition must be present in the instant specification. Additionally, the terms "movable" and "non-movable" are not present in the PCT publication on page 8, lines 20-24 as claimed by applicant.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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13. Claims 1-4, 9-10, 12, 15,17 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al, Applied Physics Letters, Volume 72, Number 19.

The reference discloses polymer electroluminescence devices that use an ionomer as the electron injecting material. Additionally, the reference discloses that the ions can be metals ions such as sodium, lithium, copper and aluminum as per instant claims 1-2, 12 and 21(see page 2382). The reference also discloses four different polymer light-emitting devices of poly [2-methoxy-5-(2'-ethyl-hexyloxy)-1,4-phenylene vinylene] the are fabricated on indium-tin oxide coated glass substrates as per instant claims 3 and 4 (see page 2382). Also, the reference discloses the use of an aluminum cathode as per instant claim 9 (see page 2382). Page 2384 of the reference discloses that anions can be used as per instant claims 10 and 20. The reference claims a substrate, a first electrode, a hole injection layer, an emissive layer, an electron injection layer and a cathode. Although the reference does not discloses the specific sandwich constructions as per the instant claims, it would have been obvious to make simple modifications in a multilayer EL device in order to achieve luminescent efficiency (see paragraph 1 of page 2382).

Response to Arguments

14. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (571) 272-1526. The fax phone number for the Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

